

Remarks/Arguments:

I. Status

The Office Action dated November 16, 2004 (the "Office Action") has been carefully reviewed. Claims 28-30 have been amended to help clarify an apparent misinterpretation of the Applicant's claimed invention. The definition of the tapered upstream surface portion and wider downstream surface portion are apparent in FIGs. 2-5 of this application. This change to the claims should clarify the misinterpretation of the term "edge" that appeared in the current and prior Office Actions. Entry of the above amendments and reconsideration of this application, as amended, is respectfully requested.

II. The Office Action Should Not be Final.

The Office Action states that the action is final because the new grounds for rejection were necessitated by the Applicant's amendment of the claims. Respectfully, the amendments should reasonably have been expected.

The MPEP states that "[a] second or any subsequent action on the merits in any application or patent involved in reexamination proceedings should not be made final if it includes a rejection, on prior art not of record, of any claim amended to include limitations which should reasonably have been expected to be claimed." (MPEP 706.07(a)). The new ground of rejection was based upon U.S. Patent No. 1,662,178 to Yuille (hereinafter "Yuille"). Yuille was cited as prior art for the first time in the Office Action.

Moreover, the original claims erroneously included elements reciting “a leading downstream edge” tapered into a housing with a wider “upstream edge”. As clearly shown in the embodiment of FIGs. 2-5, it is the downstream edge of the baffle that is wider than the upstream edge, contrary to the original form of the claims. Thus, as discussed in the Applicant’s amendment filed on August 17, 2004, the claims were amended so that the claims were clearly directed to the disclosed invention. Accordingly, it should reasonably have been expected that the claims would be amended to correct the error in the claims so as to claim the disclosed invention.¹

Therefore, the ground of rejection in the Office Action for the amended limitations which should reasonably have been expected to be claimed was based upon prior art not of record. Accordingly, the Office Action ought not to have been made final and the Examiner is respectfully requested to withdraw the finality of the Office Action.

III. Double Patenting.

Claims 28 and 31-33 were rejected under the judicially created doctrine of obviousness-type double patenting over various claims of U.S. Patent No. 6,637,668. A terminal disclosure under 37 CFR 1.321 (c) is filed herewith. Accordingly, it is respectfully submitted that the double patenting rejection of claims 28 and 31-33 has been overcome.

¹ Additionally, the original search is required to be made based not only on the claims, but also on the invention disclosed in the specification. (MPEP at 904). Accordingly, since the amendments made to correct the previously discussed error did not alter in any way the disclosed invention, the amendments should not have necessitated a new search.

IV. 35 U.S.C. § 103 Rejection.

Claims 28-34 were rejected under 35 U.S.C. § 103 as being obvious over U.S. Patent No. 5,203,496 to Kline (hereinafter "Kline") in view of U.S. Patent No. 1,662,178 to Yuille (hereinafter "Yuille"). Reconsideration of claims 28-34 in view of the foregoing amendments and following remarks is respectfully requested.

Discussion re Claim 28

1. There is no Motivation to Combine the References

In the Office Action, it was stated that the motivation to modify the baffles of Kline to be tapered as allegedly disclosed by Yuille was "to provide for better mixing". (Office Action at page 4). Respectfully, the Office Action has failed to identify sufficient authority for the foregoing allegations.

Specifically, the Federal Circuit has stated that "[the] factual question of motivation is material to patentability, and [cannot] be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to '[use] that which the inventor taught against its teacher.'" *In re Lee*, 277 F.3d 1338, 1343-1344 (Fed. Cir. 2002)(internal citations omitted). Significantly, the Federal Circuit in *In re Lee* determined that an examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" did not adequately address the issue of motivation to combine. (*Id.* at 1343).

Similarly, in the rejection of claim 28, the Office Action includes conclusory statements but has not identified any art that discusses the advantages of a wider downstream baffle or of why such a teaching should be combined with an orifice baffle as taught by Kline, assuming arguendo that such a modification is possible. Moreover, the Office Action has not identified any authority for the conclusory statement that such a modification would result in better mixing. This is particularly troublesome in that the device of Yuille is directed to mixing the contents of a dredge line that may include sand, mud, earth and small rocks (Yuille at column 1, lines 1-6), while the device of claim 28 is directed to mixing hot and cold water that presumably does not have any such contaminants.

Therefore, the Office Action does not set forth a sufficient basis or identify a proper source for the proposed motivation to combine the teachings of Kline with the teachings of Yuille. Therefore, under MPEP § 2143.01, the Examiner has failed to present a *prima facie* case of obviousness and the rejection of claim 28 under 35 U.S.C. 103(a) should be withdrawn.

2. The Proposed Modification Does Not Arrive at the Invention of Claim 28

The Office Action includes a proposed modification of the orifice type baffle of Kline to include “an upstream edge that tapers into the housing and a downstream edge that is wider than the upstream edge”. (Office Action at page 3). As an initial matter, it is not clear how this modification can be made to Kline’s device in which each of the baffles 37-39 is “disc shaped and defines an elongated or oblong opening 40, 41 and 42 respectively therethrough.” (Kline at column 4, lines 5-8 and FIGs. 3-5).

Moreover, while it is not clear how such a modification would be accomplished, any such modification would not arrive at the invention of claim 28. First, the cited feature “6” in Yuille is a spiral fin that spirals 360° around the pipe. (See Yuille at FIG. 3 and lines 39-46). Second, the “taper” that is disclosed by Yuille is actually in the thickness of the spiral fin 6. Thus, the upstream cross section of the spiral fin 6 (and hence the inner edge of the spiral fin 6) is thicker than the downstream cross section. (Yuille at column 1, lines 46-51, see also FIG. 2 wherein the inlet is located at the top of the Figure (as indicated by the flow arrow close to reference number “1”). However, it can be seen in FIG. 3 of Yuille that the spiral fin 6 does not include any change in *width* and does not taper in the manner recited in the Applicant’s claim 28.

Accordingly, modifying a feature of the baffle disclosed by Kline to include the taper of Yuille results in a baffle with a feature that is thinner at the downstream portion than at the upstream portion. A downstream feature that is *thinner* (thickness) than an upstream feature is not the same as a downstream surface portion that is *wider* (width) than an upstream surface portion as recited in the Applicant’s claims.

Accordingly, modifying Kline to include the alleged “upstream edge that tapers into the housing and a downstream edge that is wider than the upstream edge” of Yuille does not arrive at the invention defined in claim 28. Therefore, under MPEP § 2143.03, the Examiner has failed to present a *prima facie* case of obviousness and the rejection of claim 28 under 35 U.S.C. 103(a) should be withdrawn.

3. Conclusion as to Claim 28

Therefore, for any or all of the above reasons, it is respectfully submitted that a *prima facie* case of obviousness has not been established and the Examiner is respectfully requested to withdraw the rejection of claim 28 under 35 U.S.C. 103(a).

Discussion re claims 29-34

Claims 29-34 depend from independent claim 28 and are allowable for that reason. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Independent claim 28 is nonobvious at least for the reasons set forth above, thus, claims 30-34 are also nonobvious and are patentable over the prior art.

Discussion re Claims 29 and 31

Moreover, the dependent claims are patentable on their own merit. For example, claims 29 and 31 further define the baffle configuration.

An “obvious to try” argument was applied to propose modifying the baffle of Kline to include limitations recited by claims 29 and 31. Claim 29 recites a baffle that runs about 210 degrees and claim 31 recites a baffle with a paisley shape. Respectfully, there is no motivation for either of the proposed modifications.

Specifically, the Office Action includes the allegation that a baffle run of 210 degrees is “a mere choice of mechanical expedients” and that a paisley shaped baffle is “an obvious choice of mechanical design to alter the shape.” (Office Action at page 3). The Office Action further stated that motivation for choosing a baffle run of 210 degrees

was to “arrive at optimum working values” and the motivation to select a paisley shape was “to change the flow profile”.

As set forth above, the Federal Circuit has stated that “[the] factual question of motivation is material to patentability, and [cannot] be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to ‘[use] that which the inventor taught against its teacher.’” *In re Lee*, 277 F.3d at 1343-1344 (internal citations omitted).

Regarding the rejection of claims 29 and 31, the Office Action does not identify any art that discusses the advantages of a baffle run of about 210 degrees as compared to any other run or of a paisley shaped baffle. Moreover, the Office Action does not identify any authority for the conclusory statement that such limitations are mere design choices. This is particularly true in consideration of the fact that Kline discloses an orifice baffle and it is unclear how one could design an orifice type baffle to either 1) run about 210 degrees or 2) have a paisley shape. In contrast, the Applicant has explained the non-obvious benefits of these features of the claimed baffle, such as to impart a full turning action to the fluid while minimizing turbulence and pressure drops, and maintaining a circular center opening. (See Specification, paragraphs 27-29).

Therefore, it is respectfully submitted that the Examiner has failed to identify any motivation, suggestion, or teaching of the desirability of making the proposed modification to the prior art. Accordingly, The Examiner has failed to show a *prima facie* case of obviousness and the rejection of claims 29 and 31 under 35 U.S.C. 103(a) should be withdrawn.

V. **Conclusion**

Accordingly, Applicants respectfully request entry of the amendments and favorable action on the merits.

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